

Claims:

1. A device for automatically injecting injection liquids, including an axially subdivided housing whose parts are connectable with each other, wherein an axially displaceable pressure pin (5) is guided in a first housing part (2), which pin is capable of being inserted against a force accumulator (6) and locked in the inserted position and extended upon relief of the force accumulator (6), and an injection needle (15) fixed in a needle guide (14) and an ampoule (13) are mounted in a second housing part (3) so as to be axially displaceable relative to each other, wherein the injection needle (15) on its side facing the ampoule (13) is designed as a perforation piece for the ampoule (13), characterized in that the ampoule (13) with its end facing the injection needle (15) is mounted to reach into a sleeve (16) fixed within the second housing part (3) and whose inner diameter substantially corresponds to the outer diameter of the ampoule (13), that radially inwardly protruding projections (17) are formed on the inner periphery of the sleeve (16), and that the sleeve (16) comprises locking members cooperating with locking members (20) of the needle guide (14), whereby an axial displacement of the ampoule (13) in the direction to the needle guide (14) while overcoming the displacement resistance exerted by the projections (17) causes the release of the locking members (20) and the axial displaceability of the needle guide (14).

2. A device according to claim 1, characterized in that the locking members of the sleeve (16) are formed on arms (19) capable of excursing outwardly in a resilient manner, said arms (19) each carrying an inwardly protruding projection (23) in the region of their coupling site, which cooperates with the ampoule (13) under the excursion of the arms (19) and release of the locking members (20).

3. A device according to claim 1 or 2, characterized in that the end-side annular surface of the sleeve (16) facing the needle guide (14) rests on a radially inwardly protruding projection of the second housing part (3).

4. A device according to claim 1, 2 or 3, characterized in that the locking members are comprised of snap-in noses (20) engaging in reception openings, said snap-in noses (20) being preferably formed on the needle guide (14).

5. A device according to any one of claims 1 to 4, characterized in that a spring element acting in the axial direction is arranged between the needle guide (14) and the ampoule (13).

6. A device according to claim 5, characterized in that the spring element is designed in one piece with the needle guide (14), as a spring basket (25) compressible in the axial direction.

7. A device according to any one of claims 1 to 6, characterized in that the injection needle (15) includes a radial passage opening (33) at an axial distance from its end designed as a perforation piece (32) for the ampoule (13).

8. A device according to claim 7, characterized in that the radial passage opening (33) in the axial direction is arranged between the injection needle end designed as a perforation piece (32) and an annular web (34) arranged on the needle guide (14) and surrounding the injection needle (15), said annular web (34) defining a closed annular space between the web (34) and the injection needle (15) reaching into the ampoule (13).

9. A device according to any one of claims 1 to 8, characterized in that the ampoule (13) with its end facing away from the injection needle (15) is arranged to reach into a sleeve-shaped ampoule socket (28) which comprises a plurality of lamellar guide ribs extending in the longitudinal direction.

10. A device according to claim 8, characterized in that the ampoule reception opening facing the first housing part (2) including the pressure pin (5) is closed by a gas-permeable sealing foil (29).

11. A device according to claim 9 or 10, characterized in that a seal and, in particular, an O-ring seal (30) is arranged between the outer periphery of the ampoule socket (28) and the inner periphery of the second housing part (3).

12. A device according to claim 8, characterized in that the outer periphery of the ampoule socket (28) comprises a labyrinth seal, and that a seal and, in particular, an O-ring seal (30) is arranged between the ampoule socket (28) and the ampoule (13).